

Anything 85 decibels or louder can start causing damage to our hearing

>> Alyssa Ottmar: Anything 85 decibels or louder, that's where it can start causing damage to our hearing.

>> Alan Feirer: That's today's guest, audiologist Alyssa Otmar, uh, showing us that our hearing might be even more vulnerable than we think. Welcome to Music Ed InSigHtS. I'm leadership trainer and former band director Alan Fire, here with composer and co college music education program head Steve Shanling.

>> Steve Shanley: Each episode, Alan and I talk with national thought leaders in music education with practical insights for k twelve music educators.

This episode features guest Alyssa Otmar on hearing health

>> Alan Feirer: Steve, tell us about our guest.

>> Speaker C: Alyssa Otmar graduated from the University of Northern Iowa with a dual degree in viola, performance and communication sciences and disorders and also earned her doctorate in audiology from the University of Iowa. She loves helping others learn about hearing health and has been invited to participate and present in a number of research studies, clinics, and workshops. She is a tenured member of the orchestra Iowa Viola section and performs with the Cadence String Quartet. Find Alyssa's full bio, show notes and resources@musicedinights.com. Alan, what was the takeaway you had from this episode?

>> Alan Feirer: Doing something is better than nothing. If we're overwhelmed by all her suggestions, it's reassuring to know that using any of them will help. What about you, Steve?

>> Speaker C: Because it's so important I am okay that my takeaway is the same as yours. Anything is better than nothing when it comes to hearing protection. Next week, we will share the unedited version of this with members of our Insider program. It has a lot of fun back and forth banter between the three of us, and even more cool info about hearing health for music teachers.

>> Alan Feirer: For more on this, check our website. We'd love to have your support as a member of our insider community, but don't worry, you'll still get lots from this official episode. Edited to keep it short and punchy. Let's get to hearing health with Alyssa Otmar.

Alyssa Otmar: Sound level awareness is a healthy habit

>> Speaker C: Alyssa Otmar, welcome to the program.

>> Alyssa Ottmar: Thanks for having me.

>> Speaker C: Well, I think this might be the most sensitive subject we have discussed on this show, and I'm not being sarcastic. I think that having great ears is perhaps one of the most prized compliments we can receive as musicians, and the thought of losing our hearing can be very distressing. So let's start with this. Let's say I'm one of those people who doesn't think much about my teeth, my heart, or my hearing, because at the moment, nothing is very wrong. And also because I'm kind of nervous about getting bad news from m the dentist or doctor or audiologist. So what would you say to help me have a healthy awareness, but not get me totally freaked out about my hearing.

>> Alyssa Ottmar: I love this question. I think this is a great way to start us off. There are several different options for us to help us become more aware, and I have, uh, four different ones that I'd love to share with our listeners today. The first one I would consider the first healthy habit is sound level awareness, just knowing how loud our environment can be. There are two apps that I would recommend. There's one that's called decibel X, and the second one is called a NIOSH app. And NIOSH stands for the National Institute for Occupational and Safety Health. You can have those apps on your phone and see how loud your environment is and see if it's maybe a little bit too loud. The second thing I'd recommend for healthy habits is lowering the volume. For example, for iPhones, I have an iPhone. This can be ingested. If you go into your iPhone settings under headphone safety, you can reduce the loud sounds. Also, it can be as simple as just walking away from a loud noise source. So this can include sitting in a quieter section of a restaurant, maybe not sitting by the kitchen, or seated further away from a performance speaker. The third healthy habit I'd suggest is just be a good consumer. A lot of different items or appliances can get kind of loud, so just check the noise rating on those appliances. This can include even hairdryers. I will say the other thing that it may include is children's toys. I'm not sure if we know this, but it can get up there in decibel levels. And I know we're focused on music education, but I'm sure a lot of our music educators have kids that have these toys. And research has showed that these toys can get almost as loud as a jet engine sound, which is about 120 decibels. And some kids, they may even put the toy up to their ear, which could cause even more damage and can be loud for you, too. The fourth suggestion I'd have is wear hearing protection. And this is especially helpful for us as musicians, since we sometimes can't always walk away from our sound source. All to say is we check our eyes, we check our teeth at least once a year, or we should. We could also check our hearing. And so the last thing I'd recommend is maybe just getting an annual hearing check.

>> Speaker C: Do I really need to be worried about losing my hearing while working with, for example, just like, a middle school group that isn't going through any sort of amplification at all? Can those instruments or young voices really do any damage?

>> Alyssa Ottmar: That's a great question. So it doesn't really matter the type of sound we are listening to, but rather it's the level of the sounds we are exposed to and the length. So the level and the length is what we mainly look for. Research has shown when they've measured sound levels for middle school bands, the band directors were exceeding their safe levels. I think it was almost over 500% of the daily allowance that they should have with their hearing.

>> Speaker C: So it really doesn't matter.

Sound is measured in decibels, and anything over 85 can damage hearing

You said the type of sound, it's the volume and then the duration. So I was kind of wondering about that, too. The difference between hearing, let's call it a super loud noise for 15 seconds versus a kind of loud noise for five minutes. So you mentioned the length of time mattered. Can you talk a little bit about that?

>> Alyssa Ottmar: So just some general basics. Sound is measured in decibels, and decibels is a, uh, logarithmic scale. So a quiet room is about 50 decibels, and a typical conversational level, we would say, is about 65 decibels. But I want us and our listeners to remember or keep in mind is 85 decibels anything 85 decibels or louder, that's where it can start causing damage to our hearing. For every three decibels over 85, the amount of time that we can listen to this level before possibly damaging our ears cuts in half. So 85 decibels you and I could listen to for about 8 hours before we have possible damage to our hearing.

>> Speaker C: 8 hours over the course of our lifetime, or eight solid straight hours of 85 decibels.

>> Alyssa Ottmar: Good clarification. Eight straight hours with a day of 8 hours of recovery the next day. But if we get up to 88 decibels, that already cuts our time in half to 4 hours, and then if we keep going up to 91 2 hours. Now, I hope you don't mind, but I think we should play a little game. I'm going to give you an item or a scenario, and I want you to guess if you think it's above or below 85 decibels. Sound good?

>> Speaker C: Okay.

>> Alyssa Ottmar: And I'd love for the listeners to play along, too. So how about a lawn mower?

>> Speaker C: Uh, gasoline powered lawn mower. That's got to be above 85.

>> Alan Feirer: I'd agree.

>> Speaker C: Over.

>> Alyssa Ottmar: Yes, it's about 91 decibels. How about a kitchen blender?

>> Speaker C: M I'll go over. Yeah. Especially if it's like from the 1980s. Still my kitchen blender, right?

>> Alyssa Ottmar: Yes. The average kitchen blender is about 94.

>> Speaker C: Decibels louder than the lawn mower louder.

>> Alyssa Ottmar: Than the lawn mower.

>> Speaker C: Okay, so just 1 hour.

>> Alan Feirer: Just 1 hour of blending. If I've done my math correctly, that's all you get.

University of Iowa did sound level measurements at Iowa high school in 2019

>> Alyssa Ottmar: How about some music examples? Are we up for a few of those?

>> Speaker C: Yeah, please.

>> Alyssa Ottmar: So, the University of Iowa, we did a sound level measurement at, uh, one of the high schools in Iowa city, and we did some sound level measurements during a warm up back in 2019. And so we received a grant provided by the University of Iowa to do this. So this is where we got these measurements from. Um, so let's start with the woodwind section. So I had a sound level meter next to the woodwinds doing a warm up. How loud do you think it got?

>> Speaker C: How big was the woodwind section?

>> Alyssa Ottmar: So the whole band was 169 students.

>> Speaker C: Okay, so half woodwinds. That's got to be easily past 85. I bet that's in the 90s. Yeah, for just the woodwinds.

>> Alyssa Ottmar: 97. 97 decibels. So that's about 45 minutes before potential hearing loss of. Consistent at that level.

>> Speaker C: Mhm.

>> Alyssa Ottmar: How about the conductor? We were right next to on the conductor podium, right next to his ear. How loud do you think it got?

>> Speaker C: Right next to the conductor, the woodwinds?

>> Alyssa Ottmar: Just right on the podium where the conductor was standing.

>> Speaker C: Band?

>> Alyssa Ottmar: Mhm. Correct.

>> Alan Feirer: 87.

>> Speaker C: Oh, I bet into the hundreds.

>> Alyssa Ottmar: 98.

>> Speaker C: Okay.

>> Alyssa Ottmar: 98 decibels. So that is less than 20 minutes before potential hearing loss. And again of that consistent level.

>> Speaker C: I know a lot of us would say, yeah, I know it's dangerously loud, but my job is to make my group sound good. And in order to do that, I have to be able to hear them, and they need to be able to hear each other. So we can't have earplugs, and I won't make my students wear them either. This might be a good time. We mentioned this in the intro, our bio for you, that you're a musician as well. And I feel like, especially coming from someone who is a professional musician, saying, yes, these work, they're okay. That might have a little bit more weight than some professor at a university who we imagine just walks around with earplugs all the time and doesn't really understand what it's like to be a musician.

There are several different types of musician earplugs available

So letting the listeners know you and also your husband, a, uh, professional musician, um, and band director as well. He's always good about wearing his earplugs. Tell us about these great musician earplugs. Please tell us. They're very affordable. What do we need to know?

>> Alyssa Ottmar: So there are several different types of musician earplugs the first one are just the general bass line level, and they can be purchased on Amazon, and I can make sure to share the links or, um, the suggestions that we have that will provide about 15 to 20 decibel, uh, level of attenuation. So, in comparison to the game we played earlier, if you're in an ensemble and it's about 100 decibels, if you have your earplugs in

and it's a 20 decibel attenuation, you just put it down to 80, and you can listen to it for a lot longer. Right. So those are the basic level of musician earplugs. The second option are custom musician earplugs. And so you would go to an audiologist, and you would get an ear mold impression. So they would take an impression of your ear, and they'd send it off to a lab, and they would get you some silicone earplugs that can have different filters. So you can have a filter with ten decibels of attenuation 1520. So, for our music educators, if you want to make sure you can hear but want to make sure you're at a safe level, you could even put in the ten decibel filter. The custom earplugs are actually what I use. And from one musician to another, I'm going to be completely honest. When I first wore them, I hated them. I did not like them at all. I was experiencing the exact same thing that you, Steve, were talking about. I was missing things. I felt like I couldn't hear. I couldn't even hear my stand partner say something and felt so embarrassed. But I, uh, started practicing with them individually in the practice room and started adapting to what they sounded like. The other thing I did was I only wore one. So as a violist, I actually only wore it in my right ear because I was sitting right next to the woodwinds, and I kept it open in my left ear so I could hear my intonation, and I could hear my section. Now, whenever I'm playing in orchestra and ensemble, I have both of them in, and I can't, uh, rehearse without them. So it did not happen overnight. It took a long time, and I'm still learning some new tricks or tips to help me enjoy ensemble rehearsal and also protect my ears.

>> Speaker C: Yeah, you mentioned not being able to hear your stand partner speak. That is the biggest frustration for me. So, about ten years ago, when we discovered that I had the hearing loss in my left ear especially, they said, it's okay, but you don't want to lose much more. I had those custom plugs made that you talked about having this stuff poured in my ear. Not super pleasant, but not awful. Uh, and still to this day, I am pretty much fine rehearsing a jazz band with those in, and I can do what I need to do, but what I feel really bad about, and especially since I am teaching college students where I don't demand that they raise their hand if they have a question about something and I just want them to be able to say, so is that off on four there, or is that pitch short? Or I wonder about a note. I miss that stuff because I have full on whatever they gave me, had a bunch of different options, and I went with the most hearing protection, whatever that would have been, and I can't really hear them. So that has been a little bit frustrating. And I'm trying to kind of get in the habit of kind of pulling them out when the music isn't going so I'm able to hear. But those quick questions. And so what you got me thinking about is this idea that it's not an all or nothing proposition necessarily, that even if we are just reducing the amount that I am getting barraged by five decibels or ten, and maybe 20 would be best. But if I am going by ten and the rehearsal is only an hour and I do the ten, but I can still hear them speaking, that's still going to be pretty good and a decent amount of protection. Am I understanding that correctly?

>> Alyssa Ottmar: Overall? Yes, every little bit is going to help. Absolutely. The other thing I'd recommend, Steve, is just make your students aware, saying, hey, I'm wearing earplugs. So if I don't hear you, just repeat again or get my attention, raise your hand and I'll make sure to answer your question or comment.

>> Speaker C: Yeah, that's a good idea. Kind of embarrassed that I have, uh, not done that in the last.

>> Alyssa Ottmar: No.

>> Speaker C: So that's one of the reasons, really. Alan and I have this podcast mostly for selfish reasons, so we can just kind of keep learning about things. But yes, that will be good on Tuesday. I will say, by the way, you've all noticed that I wear these earplugs. Please just go ahead and, uh, I also rehearse in a circle, so I can't always see everybody. Maybe I should give them all like, nerf balls or something and they can throw them at me when they have a question. If I'm not facing them, they would probably enjoy that.

>> Alyssa Ottmar: I'll let you make that discretion.

You've got some links for possible earplugs that our students could use

>> Speaker C: So just ballpark. You said you've got some links for possible earplugs that our students could use. Roughly what might those run us?

>> Alyssa Ottmar: The standard musician earplugs? Yeah, about 15, \$20.

>> Speaker C: Okay.

>> Alyssa Ottmar: There is one more option of earplugs. So I mentioned the basic level, which is just like a universal level the can get on Amazon. I mentioned the custom earplugs and those, depending on your audiologist, they may run about \$100 for custom earplugs. And, uh, there's a higher level. The highest level, I would say, is there's some electronic earplugs. Those can get up to about \$400. And again, I haven't had the opportunity to use them yet, but they kind of listen to your environment and adjust the attenuation based on your current listening situation. Some people love them, other people can't stand them. So again, it's just what works best for you.

>> Speaker C: Yeah, \$15 or \$20. We think about all of the things that we do for our health, that we spend a lot more than that. Uh, totally, uh, seems sort of sad that such a serious problem can be fixed with so little money and just a little bit of effort.

>> Alyssa Ottmar: Well, the other thing I'll say, too, is if people are absolutely adamant that they cannot wear earplugs into the classroom, it just does not work for them at all. Well, then maybe wear your earplugs in a different loud environment, such as using the lawnmower or the leaf blower. Take them to a loud sporting event, whether it's a big university event or your kids event, maybe going to a concert or an arena or sometimes even a loud restaurant, anything will help.

>> Speaker C: That's, uh, I think a great reminder from earlier and a good way to kind of close this down that anything is better than nothing.

>> Alyssa Ottmar: Yes.

>> Speaker C: And so if you can find those spots where you don't need to hear every last little bit, I wonder if our listeners are really, and I would love to hear from you listeners if a bigger issue of wearing the plugs would be classroom management. Like, yeah, I can pretty much figure out that my students are going to miss the a naturals on this piece. And I know to tell them to release here and to line everything up, but it would be the side conversations and the talking and those sorts of things that would be a little easier to miss if you had the noise plugs in.

>> Alyssa Ottmar: Yeah, good point.

Tinnitus is any ringing or buzzing sound that an individual hears

>> Alan Feirer: Can you talk for two minutes about tinnitus? What color ribbon do we wear for tinnitus awareness? And when can I have a cure for my ear?

>> Speaker C: Ringing.

>> Alyssa Ottmar: So for our listeners, uh, tinnitus is any tinnitus.

>> Alan Feirer: That's how you say it. Never heard a professional pronounce it. Okay, thank you for that.

>> Speaker C: Yeah.

>> Alyssa Ottmar: Again, why we do the podcast. Right, right.

>> Alan Feirer: Learn it.

>> Alyssa Ottmar: So tinnitus is any ringing, buzzing, chirping, beeping that an individual hears that is not present in our external environment. And unfortunately, we don't know the exact cause of tinnitus, so therefore we do not have a cure. We have theories about what could cause tinnitus and ideas. Um, but we do know if someone does have tinnitus, then they have had potential exposure to loud sounds previously that could be causing that tinnitus. The current theory is that the tinnitus is the brain trying to make up sound that it used to have before.

>> Speaker C: Mhm.

>> Alyssa Ottmar: But is now missing. Again, it's just a theory.

>> Alan Feirer: It's doing a lousy job of that.

>> Alyssa Ottmar: Do you have Alan?

>> Alan Feirer: Yeah, I'm definitely not missing. Just sort of this relatively high pitched, constant sound in the background.

>> Alyssa Ottmar: Is it more so at night or when it's quiet?

>> Alan Feirer: It's when it's quiet, and I notice it more at night and it does ebb and flow. And I've been living with it for about three years, and I've tried really hard to detect patterns of when it is worse and when it is better, and I can't.

>> Speaker C: Okay, this is your chance to break the stereotype everybody has of viola players and show that you are good natured and have a good sense of humor and like to have fun. Are you ready for the lightning round?

>> Alyssa Ottmar: Let's do it.

About the most memorable live music performance you've attended

>> Speaker C: All right. Favorite restaurant you visited in the United States?

>> Alyssa Ottmar: Can I say a couple?

>> Speaker C: You may.

>> Alyssa Ottmar: The ones that come to mind are the mucky duck and the bubble room on Captiva island in Florida. But I can't leave out a, uh, trip. My husband and I went to Nashville, and we thoroughly enjoyed, uh, liberty commons and biscuit love.

>> Speaker C: How about a piece of music, composer or performer, that you wish more people knew about?

>> Alyssa Ottmar: I would love for more people to know about rock Monanov's Piano concerto number two and hear it performed by George Lee. And just for reference, George Lee, he won the silver medal at the international Tchaikovsky competition back in 2015, and he came and played this piece with us at the very last minute after our original pianist had to cancel. So it was just unbelievable.

>> Speaker C: How about a favorite vacation destination?

>> Alyssa Ottmar: Now, I don't know if this is officially going to count as a vacation, but I did help chaperone my husband's international trip with his high school music. Aw.

>> Speaker C: Uh, what a sweet.

>> Alyssa Ottmar: Took. They took their band, their choir, and their orchestra to great Britain. The other special thing was my husband's brother in law, he lives in London, and so we got to see him. He came to the concerts, and we got to enjoy some time together. So that was really special.

>> Speaker C: About the most memorable live music performance you've attended, three come to mind.

>> Alyssa Ottmar: I attended Chicago Symphony Orchestra's performance of box b minor mass when I was an undergrad under Ricardo Mooti. And I still remember to this day. They got to the climax of that piece, and Ricardo Mooti just stopped conducting and just let the musicians go. It was so powerful. Also, my husband and I, again, the Nashville trip we took, we experienced Amy Grant and Vince Gill's iconic Christmas, uh, show at the Ryman. And that was super fun. But most recently, my mom and I went to New York in May of 2022, and we saw Hugh Jackman and Sutton Foster perform the music man on Broadway. And it was just an amazing delight. Uh, we kept saying afterwards, it's so unique to see a musical based in small town Iowa have a spot in the Big Apple.

>> Speaker C: Yes, because all three of those were very different genres. I'll allow it. And finally, a book recommendation for our listeners. Please.

>> Alyssa Ottmar: Well, as much as I wish I had time to read books, I'm usually practicing or studying my music in my free time. But I do travel a fair amount for work and have come across a, uh, handful of podcasts, including this one. But one I came across is called sticky notes. It's with Joshua Weilerstein. Now, Joshua is a young conductor who's currently the music director of Phoenix, which is actually an orchestra based in Boston. Um, but he was inspired by his icon and idol, Leonard Bernstein, to create a musical podcast for music lovers and newcomers. And so he takes different iconic works from Shostakovitz symphony number ten to, uh, Mozart's Symphony number 40 to Schubert cello quintet, and just dives into the piece and explains it in really fine detail. So I've enjoyed listening to those.

>> Alan Feirer: Alyssa, Otmar, it's been great visiting with you. It went even better than I could have hoped with a violist. It gives me faith that at some point, we'll have an alto clarinetist on the show, and that will go just as well. No, really. It's been really educational, really helpful. It's been fun. Thanks so much.



>> Alyssa Ottmar: Thank you for having me.

>> Alan Feirer: Thanks for listening to music. Ed Insights.

>> Speaker C: We're supported by Group Dynamic, a leading provider of youth leadership workshops. Alan works with dozens of schools each year to help develop their leaders. Learn more@groupdynamic.net slash youth leadership.

>> Alan Feirer: Or you could email me at alan@groupdynamic.net also sponsored by the Co College Music education program. They've got a website, too.

>> Speaker C: Just click their link at our website or email me at ah shanley at coe uh.edu.

>> Alan Feirer: Also the normal design helping normal companies and people create memorable, meaningful, and professional designs and branding.

>> Speaker C: More@thenormaldesign.com and Winterset websites website design and maintenance winterset.com our Facebook page is musiced insights. Our website has program notes, links, and a one page download of this episode's key takeaways. That's Musicedinsights.com.

>> Alan Feirer: New episodes generally drop every couple weeks on Monday.

>> Speaker C: Get current stay relevant Music ed Insights.

>> Alyssa Ottmar: Channel M.